CLOVELLY FARMS EMU

SOILS The entire study unit is drained freshwater marsh. Soils consist of organic layers that are underlain by clays. The land has been leveed and drained by pumps. Organic layers may separate and float if flooded.

LOCATION The EMU is bordered on the north by the Scully Canal and North Little Lake EMU, on the east and south by the Clovelly EMU, on the west by the South Lafourche levee and the South Lafourche "A" EMU

VEGETATION: Modified wetland vegetation is found throughout the area where land is not cultivated.

SUBSIDENCE POTENTIAL IF DRAINED Area has already been drained and has undergone subsidence to minus five(-5) feet in some localities. Slow continual subsidence is to be expected over time as organic layers continue to oxidize.

LAND LOSS POTENTIAL DUE TO CHANNEL CONSTRUCTION: Medium, due to the nature of soils. Because of the subsidence of the land, the area would become a lake if waters breached the protective levees.

TOPOGRAPHIC FEATURES The study unit is surrounded by a seven (7) to nine (9) foot .MSL levee and has been drained by pumps. There are approximately 2,400 acres of reclaimed land. Scully Canal provided boat access to the unit at one time. The canal is now too shallow for navigation. An airstrip is located on the canal at the study unit boundary. Elevations of minus five (-5) feet are located within the study unit. The unit is divided into plots of agricultural land by drainage ditches.

FLOODING POTENTIAL: Clovelly Farms is a flood prone area. It is surrounded by a levee system and will be protected by the new 13 foot hurricane protection levee.

IMPORTANT FARMLANDS: Sugarcane farmlands of Statewide Importance are found at Clovelly.

USE OF LAND: The land was developed for the purpose of sugarcane farming and most is still used for this purpose. Some land is pasture land, used for cattle grazing. Oil and gas extraction is not a prominent use in the study unit, but extraction takes place on a larger scale in the land surrounding the unit. The land is privately owned.

UNIQUE ECOLOGICAL FEATURES: None.

RECREATIONAL POTENTIAL: The study unit is privately owned and probably would not be open to public recreation use.

HYDROLOGIC RESOURCES: Freshwater extends to a depth of three hundred (300) feet in the study unit.

HISTORIC/CULTURAL/ARCHEOLOGICAL: None.

PROBLEMS NOTED:

1. Slow subsidence of land coupled with the rabid initial subsidence that accompanied reclamation has resulted in extensive artificial drainage and flood protection measures. These include:

a. Pumps to get water out due to low elevation of the interior
b. A levee of plus seven (7) to nine (9) feet MSL to keep water out

2. The area presents a flood hazard during major storms should the levees be breached
3. Land has been permanently taken out of the wetlands ecosystem

GOAL

1. Maintain agricultural production in Clovelly Farms

POLICIES

POLICY 1. Maintain the reclaimed areas as a sugarcane plantation.

POLICY 2. Discourage any urban development, commercial, industrial, or residential due to low elevation and poor foundation conditions unless flood protection is improved significantly. Besides these guidelines, all coastal use guidelines as stated in the F.E.I.S. of the Louisiana Coastal Zone Management Program shall apply to this EMU

Where EMU policies refer to a "use of state concern", the policies are intended only as recommendations to the state program managers and are not legally binding on the permit applicant or the state CZM program.

CLOVELLY

LOCATION: The EMU is bordered on the north by the Scully Canal, on the west by Clovelly Farms and the South Lafourche levee, on the southwest by the channel of Bayou L'Ours, on the west again by the Tennessee Gas Pipeline Canal, on the south by unnamed pipeline canal, on the east by a series of oil field access canals to Little Lake, then along the Lafourche-Jefferson Parish border through Little Lake.

LAND COVER: To be determined by Landsat analysis.

SOILS: Generally undrained, brackish marshland consisting of organic layers of various thicknesses, underlain by soft dispersed saline and mucky clays. When flooded, organic layers may separate and float. Along Bayou Lt Ours an extensive natural levee system has created a long narrow finger of Sharkey-Tunica Association soils. Soils are dark gray with a clay surface and poorly drained. These soils are poor for use as building sites but

firm enough to support bottomland hardwoods in the upper sections of the distributary and very small swamp areas also at the upper end of the distributary channel.

VEGETATION: Vegetation is almost exclusively brackish water marsh. Along extensive spoil banks, spoil bank succession upland brushy vegetation has developed. Along the upper portions of Bayou L'Ours, a very thin Cypress-Tupelo Gum swamp and a thinner strip of bottomland hardwoods, mainly oak still survive. Most of the swamp has been lost due to saltwater intrusion and natural levee subsidence. The vegetation is changing rapidly to marshland as the trees die off due to the above mentioned problems.

SUBSIDENCE POTENTIAL IF DRAINED: Natural levee soils along Bayou L'Ours would have a low subsidence potential if drained due to their mineral nature. However, geologically, the natural levee ridge is subsiding back into the marsh. The rest of the unit is brackish marsh with a very high potential for subsidence (51"+) if drained.

LAND LOSS POTENTIAL:

A. Due to Channel Construction: High everywhere in the unit. Land loss rates exceeding 400 acres per year occur in the southern portion of the EMU

B. Due to reclamation: N/A

C. Due to saltwater intrusion Marshlands are changing in character toward saline. Primary destruction comes from subsidence and channel construction.

TOPOGRAPHIC FEATURES: The area of the EMU is almost exclusive marshland at or near sea level. Elevations approaching +5 feet MSL occur on spoil banks and along a thin strip of remnant natural levee Associated with Bayou L' Ours in the upper portion of the distributary.

FLOODING POTENTIAL: The entire area is flooded permanently. The upper portion of low alluvial ridges of Bayou L' Ours would only flood during storm periods.

IMPORTANT FARMLANDS: None.

USE OF LAND: Predominant use of land is for the extraction of oil and gas. Oil fields include the Clovelly Oil and Gas Fields in several areas and portions of the Coffee Bay, Kings Ridge, and East Golden Meadow Oil and Gas Field. Along the Clovelly Salt Dome is the Louisiana Oil port Storage and pump facility. The L.O.O.P. pipeline also runs throughout this EMU At the Clovelly Salt Dome, crude oil is stored in underground caverns leached out of the salt dome. Fresh water from the Breton Canal is injected below the surface to leach out the brine. There is also a Brine Storage Reservoir of 200 acres used to displace oil out of the salt dome and into the pipeline transportation networks. The total operation at the salt dome occupies about 600 acres.

UNIQUE ECOLOGICAL FEATURES.

A. Geological: Clovelly salt dome. The top of this dome is approximately 1,200 feet below the surface,

B. Geomorphological The Bayou L'Ours natural levee and distributary provides a low ridge along the southwest boundary of the EMU

C. Botanical: None.

RECREATIONAL POTENTIAL: Hunting and fishing. Long narrow alluvial ridges provide potential access deep into wetland areas.

HYDROLOGICAL RESOURCES: Base of ground water table varies from no freshwater to 300 feet. Even where freshwater is available, it must be piped at a very low rate. Below and sometimes above, water rapidly becomes brackish or saline.

HISTORIC/CULTURAL/ARCHEOLOGICAL:

A. Historic Sites: None.

B. Cultural: None.

C. Archeological:

LF 1 Known Shell midden West fork of Bayou L' Ours

LF 22 Known Shell Midden Little Lake and Scully Canal

LF 23 Known Shell Midden Shoreline of Little Lake

LF 24 Known Shell .\Midden Shoreline of Little Lake

LF 25 Known Shell ',Midden Shoreline of Little Lake

LF 26 Known Shell !Midden Shoreline of Little Lake

LF 27 Known Shell Hidden Shoreline of Little Lake

PROBLEMS NOTED:

1. Rapid deterioration of marshland on both sides of Bayou L' Ours southeast section of EMU
2. Retreat of shoreline alone Little Lake
3. Erosion of oil and gas access canals in oil fields
4. Potential water pollution and erosion caused by L.O.O.P. facilities
5. Saltwater intrusion into the area